



# Winter 2006 Request for Proposals

## Retention of Science and Mathematics Teachers

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As part of its support for high quality professional development to ensure that every student has a highly qualified teacher, the California Postsecondary Education Commission (CPEC) announces a Request for Proposals (RFP) for **master grantees** to award and administer projects contributing to the retention of science and mathematics teachers in California. This RFP supports and complements a number of current and proposed state and federal initiatives to improve teaching and learning in science and mathematics.

### Introduction

The California Postsecondary Education Commission (CPEC) administers the Improving Teacher Quality State Grants Program (ITQ) under Title II, Part A of the No Child Left Behind Act of 2001 (NCLB). This Winter 2006 Request for Proposals (RFP) is intended to provide targeted funding for science and mathematics teacher retention. It specifies both (1) the eligibility of proposers and (2) specific project goals and activities:

1. *Proposer Eligibility* –Although the Commission ultimately intends to fund as many as 24 multi-year projects of up to \$100,000 per year, the Commission has determined that the most effective and efficient method of attaining this funding goal is to make two awards—one in science, one in mathematics—to consortia or collaboratives of university-based professional development providers. Therefore, this RFP solicits proposals **only** from such consortia or collaboratives with a demonstrated capacity for running internal grants competitions, providing high quality professional development to low performing schools and districts, monitoring site performance, and conducting research and reporting results to the field (see “Eligibility of Master Grant Proposers,” p. 5).

Primary project activities (professional development to support retention of science and mathematics teachers) are to be delivered through sub-grants to partnerships that include a department or school of education in an Institution of Higher Education (IHE); a department of science or mathematics in an IHE, and a Local Education Agency (LEA). The master grantees are not required, but may choose, to include a high-need LEA in the master grant. However, each master grantee shall require the inclusion of at least one high-need LEA in **each** sub-grant.

2. *Project Goals and Activities* – The Commission seeks to fund projects with the goal of increasing the retention of current grade 6-12 science and mathematics teachers. Such projects might target their activities at new teachers in the induction or immediate post-induction stage; teachers lacking credentials or who have not yet met all requirements as “highly qualified” under NCLB, teachers in very low performing schools who may either leave the profession or “trade-up” to a higher performing school or district, or other retention interventions supported by the research literature (see “Master Grant Proposal General Requirements,” p. 4).

## No Child Left Behind Requirements

In order for a proposal to be considered, it must meet the following requirements of NCLB:

1. Proposers must provide evidence that overall project activities are developed and implemented under a joint agreement between a department or school of education in an IHE and a department of science or mathematics within the college of arts and sciences of an IHE.
2. Proposers must require that **all** sub-grantees also provide evidence that project activities will be implemented under a partnership that includes a department or school of education in an IHE, a department of science or mathematics within the college of arts and sciences of an IHE, and at least one high-need LEA. A high-need LEA is one that serves at least 10,000 children from families below the poverty line OR one in which 20 percent of the children are from families below the poverty line based on U.S. Census data, AND one in which a high percentage of teachers are teaching subjects outside their certification level OR in which there is a high percentage of teachers with emergency, provisional, or temporary credentials. [See [www.cpec.ca.gov/FederalPrograms/EligibleDistricts.xls](http://www.cpec.ca.gov/FederalPrograms/EligibleDistricts.xls) for a list of high-need California LEAs.]
3. Proposals must draw from scientifically based research to support the proposed activities. Although the area of teacher retention through professional development has not been heavily researched, there are several studies suggesting successful approaches (e.g., “The Impact of Mentoring on Teacher Retention: What the Research Says”, R. Ingersoll & Jeffrey Kralik, Education Commission of the States, February 2004. Proposers should also review the references cited in “Eight Questions on Teacher Recruitment and Retention: What Does the Research Say?” Michael Allen, Education Commission of the States, September 2005).
4. Proposals must contain an evaluation research and dissemination plan that adds to the existing research base and is designed to help educators understand the relationship between teacher retention and the proposed professional development strategies. The plan should make explicit the evaluation research questions being addressed, instrumentation and data, techniques of analysis, and strategies for disseminating results.

The Commission intends to make the two master grants in the spring and expects that funds will be awarded to local sites so that program activities can begin in early fall 2006.

## Background of the Retention Initiative

There is little dispute that the nation as a whole, and California in particular, suffers from a shortage of qualified science and mathematics teachers. A recent report from the National Academies of Science, *Rising above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future*, argues that maintaining the nation’s competitiveness requires recruiting 10,000 new science and mathematics teachers. California’s Science-Mathematics Initiative (SMI), which is funded through the state budget and private sources, has committed UC and CSU campuses to training 1,500 new science and mathematics teachers annually—more than doubling the approximately 1000 per year they currently produce. Yet demographic reports from the California Commission on Teacher Credentialing (CCTC) show the demand for qualified science and mathematics teachers exceeding the supply by many thousands of teachers each year.

California has historically experienced a chronic shortage of fully credentialed teachers in mathematics and the sciences (especially the physical sciences). A mid-1990s report by the California Commission on Teacher Credentialing dramatically stated the shortage for mathematics (and the situation was similar for science): “The difference between the total demand (4,559 teachers) and the total supply of new teachers (765) was 3,794 mathematics teachers in 1995-96. In reality, the shortage of fully qualified mathematics teachers may have been more...and the gap between mathematics teacher supply and demand was probably larger in 1996-97.” By 2003-04, California had increased the supply of new mathematics teachers to 1,258, but demand had also risen, leaving a still impressive gap of several thousand teachers. This shortfall, in fact, is too large to be met solely by producing new teachers.

Solutions that rely entirely on increasing the number of new teachers cannot succeed because they fail to account for teacher attrition. Without stemming the outflow of the approximately 5% of the teachers who leave the profession each year<sup>1</sup>, California cannot possibly hope to have enough qualified teachers to serve its increasing student population. According to 2003-04 data, there were 18,293 mathematics teachers and 14,444 science teachers in the classroom. Assuming a loss of 5%, 1,636 would not be there in 2005. Reducing that attrition rate by half would result in more than 800 mathematics and science teachers remaining in the classroom.

Furthermore, there is good reason to believe that stemming attrition (e.g., working with teachers already committed to the profession) is substantially less costly than creating new teachers. Reducing attrition as part of any plan that seeks to increase the number of qualified science and mathematics teachers in the classroom is an effective, cost-efficient strategy.

This retention initiative seeks to operationalize the theory that reducing attrition can be effective in helping meet the need for qualified science and mathematics teachers. Research suggests that professional development can contribute to reducing attrition; this project is intended to build on and extend that research. The Commission intends to make two master awards—one in mathematics, one in science—to consortia of university-based professional development providers for programs targeted at the retention of science and mathematics teachers. In addition to the primary goal of increasing the retention rate of grade 6-12 science and mathematics teachers, the initiative has a second goal of better understanding the role that professional development plays in teacher retention.

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<sup>1</sup> In California, statewide data do not permit precise analyses of teacher attrition. A 2002 study by CTC found that 94% of 1995-96 newly credentialed teachers were still employed one year later and that 84% were still working in education four years later. A 2002 Center for the Future of Teaching and Learning report estimated the annual attrition rate at 4.5%. While there is no data specific to science and mathematics teachers, some compelling anecdotal evidence indicates that they leave the profession in greater numbers to accept higher paying private sector employment; thus, this RFP assumes a 5% attrition rate for all California teachers.

## Master Grant Proposal General Requirements

In order to meet the goals identified above, proposals must meet the following requirements:

1. Proposers must clearly define what they mean by teacher retention and the data and methods they will employ to judge success. This clarity is essential for understanding the project's goals as well as the measures being proposed to assess project success.
2. Proposers must provide a clear discussion of the nature of the professional development models and activities that their sites expect to employ and the specific retention issue or issues they plan to address. Research and current experience suggest at least the three following vulnerable points in teachers' careers when they are particularly good candidates for professional development aimed at retention; projects should strongly consider addressing these areas:
  - When the teacher first enters the classroom and the years immediately following. Projects could work with Beginning Teacher Support and Assessment (BTSA) programs during the induction process. Alternatively, projects may wish to focus on developing strategies to work with teachers in the immediate post-induction period (years 3 through 5).
  - When teachers are assigned to low-performing schools, including those in the lowest deciles of the API and schools designated "Program Improvement." Projects could work with whole departments at "failing schools" in order to improve content and pedagogy and to create support structures for teachers.
  - When teachers are close to the requirements for full "highly qualified" (HQT) status under NCLB, or are not fully credentialed. Projects could identify these teachers and work with them to create and fulfill an individual plan for coursework, test preparation, or professional development that leads to credentialed and/or HQT status.

The Commission seeks innovative models and research-based strategies to address these and other intervention points where professional development might support and increase teacher retention. Teacher involvement in the design and implementation of the professional development model and activities is especially encouraged.

3. It is the intent of NCLB and the Commission to view awards as part of a shift to "knowledge-based" educational practice. Proposals must develop from the education research base and they must also add to that base. Successful proposals will not only contain plans for the delivery of professional development activities in the service of science and mathematics teacher retention goals, they will also contain a research plan for studying their intervention and disseminating their results. Such a plan must contain strategies for tracking all participating teachers and seeking to determine which aspects of the intervention had the greatest effect. It is expected that all participating LEAs will cooperate in providing necessary data to support this research.
4. Finally, because the Commission intends to make master grants to consortia or collaboratives, proposers (the consortia or collaboratives) must make clear their plans for running the internal grants competition (eligibility, vetting), managing the site awards (monitoring, budgets), and communication (across sites, to CPEC, and to the field).

## Eligibility of Master Grant Proposers

In order to be considered, proposers **must** meet two general tests of eligibility:

- *One:* The master proposer must be a consortium or collaborative of at least ten university-based professional development providers.

Evidence of a successful consortium or collaborative includes experience in or demonstrated capacity for running internal grants competitions (e.g., drafting RFPs; reviewing, evaluating and selecting proposals; and negotiating final grant conditions), experience or demonstrated capacity in managing a consortium portfolio (i.e., monitoring grants; resolving budgets; and conducting site building activities), and experience in collecting data and making reports (e.g., tracking individual participants; reporting to funders; and disseminating results to the field).

- *Two:* The individual sites to be awarded sub-grants must be experienced providers of mathematics or science professional development activities to low performing schools and districts.

Evidence of successful sites includes strong cooperation between IHEs and LEAs (e.g., length of partnership, shared funding, and evaluation results), quality of professional development programs (e.g., participation of Ph.D. mathematicians and scientists, competitive funding secured, and independent evaluation results), and successful strategies for working with teachers (e.g., creating teacher leaders, insuring that professional development is implemented in the classroom, and enhancing teacher professionalization).

Proposals must include substantial evidence that both of these tests have been met.

## Application Instructions

Proposers will use an Application Transmittal Form available online that may be accessed by e-mailing [Teacher\\_Quality@cpec.ca.gov](mailto:Teacher_Quality@cpec.ca.gov) (note underscore). All pages in the Application Form must be filled out and all signatures must be provided in original form on the signature page. The following items must be attached to these forms:

### A. Project Description

Provide a complete description of the proposed project. **This description must not exceed 20 double-spaced pages in a 12-point font with one-inch margins.** The description must contain the following sections (page limit recommendations):

1. *Consortium or Collaborative Structure and Activities (2 pages):* Proposers must describe the nature of their consortium (e.g., members, organizational structure, resources, history) as well as its primary activities (e.g., work with LEAs, training of consortium or collaborative members, communication with the field).
2. *Project Goals (2 pages):* Proposers must explain what they mean by retention, how features of the action plan support objectives to increase teacher retention, and what measurable indicators will be used to demonstrate project success.

3. *Action Plan (9 pages)*: Provide a coherent plan for implementing the intervention and related project activities:
  - a. Explain how the internal competition will be conducted (e.g., eligibility, vetting process, budgeting). The Commission expects that 8-12 sub-awards will be made from the consortia to sites selected through the internal competition.
  - b. Explain how the site awards will be managed (e.g., monitoring, reporting).
  - c. Identify the professional development model(s) that will guide the site project activities, and how the specific activities that are planned for participating teachers will lead to increases in science and mathematics teacher retention.
  - d. Indicate how the consortial or collaborative nature of the site awards will lead to synergies, how communication among the sites will be managed, how results will be disseminated to the field, and how grant activities may be sustained once CPEC funding has ended.
4. *Evidence of Partnerships with Schools (2 pages)*: Provide evidence of strong collaborative partnerships at both the master grantee and site level. In particular, demonstrate a strong history of collaboration with school practitioners and the capacity to maintain the collaborative relationship throughout the duration of the project.
5. *Research Plan (5 pages)*: Proposers must make clear the research questions they intend to ask and answer as well as the data to be collected and the methods of analysis. All proposers are expected to create data systems for tracking all teacher participants.

## B. Management and Budget

Proposals must also contain:

1. *Program Schedule*: The Commission intends to fund the retention initiative for five years: the first three years are for full implementation, including awarding and implementing approximately 12 sub-grants per master grant; the fourth transitional year is for completing implementation of all sub-grants and maintaining data and communications; the fifth and final year is to finalize all data collection and analysis for the research component and address dissemination and sustainability. Proposers must provide a table identifying the key project events and dates across this five-year span. Not to exceed two pages.
2. *Staffing*: Summarize the background and roles of the director, any co-directors, and other key staff for the master grant. Additionally, if the master grantee plans to hire additional staff, a brief job description should be included. Also, a description should be provided of what types of personnel are anticipated at the site level. Not to exceed two pages.
3. *Budget*: Please use the Commission's budget forms to provide both a summary and detailed budget of proposed expenditures. It is expected that the Commission will award up to \$1.5 million per master grant per year for each of the first three years; up to \$500,000 per master grant for the fourth year; and up to \$250,000 per master grant for the fifth year.

Clearly indicate those costs that will support the consortium or collaborative administrative and evaluation research activities and those that will support sub-grants. *It is expected that at least 80% of the grant amount in each of the first three years will be awarded in sub-grants, and that reduced sub-grant activity will continue in the 4<sup>th</sup> year.* (Note: sub-grantee

budgets are to be included under “Other” in total; itemized sub-grant budgets, once funded, will be expected to follow the same general format as the master grant.) The total grant, including sub-grants, must be used to calculate that no single partner receives more than 50% of the total grant pursuant to requirements of federal law (see pages 64-66 of the August 3, 2005 Title II, Part A Non-Regulatory Guidance at [www.cpec.ca.gov/FederalPrograms/ITQGuidance.pdf](http://www.cpec.ca.gov/FederalPrograms/ITQGuidance.pdf) for a more extensive explanation of the 50% limitation requirement). While matching funds are not required, they are encouraged; proposers should particularly consider utilization of Title II, Part A formula grants to LEAs to support strategies that assist teachers in attaining credentials or highly qualified teacher status.

## Criteria of Merit

Proposals will be judged according to a 100-point rubric divided into categories mirroring the proposal sections, with the following considerations:

1. *Consortium or Collaborative Structure and Activities* (15 points): Strength and duration, leadership, frequency and quality of activities.
2. *Project Goals* (10 points): Alignment with retention initiative, consistency with action plan, measurability.
3. *Action Plan* (30 points): Method and means of making site awards, monitoring and reporting schedule, research basis for site professional development models, how the grant activities will improve teacher retention, dissemination, and sustainability.
4. *Evidence of Partnership(s)* (10 points): Partnership history, results, and shared resources and responsibilities.
5. *Research Plan* (25 points): Research questions asked, data and methods of analysis, integration with the action plan.
6. *Staffing* (5 points): Adequate descriptions of all key roles, evidence of successful management.
7. *Budget* (5 points): Budget properly scaled to project size and activities, meets federal 50% rule.

Following reader evaluation, proposals will be rated as fundable or not fundable. Interviews may or may not be held with proposers whose proposals are rated as fundable prior to the announcement of awards.

## Application Process

It is not required to file a Letter of Intent to submit an application. However, potential proposers must request access to the online fillable forms—the Application Transmittal Form and Budget Summary and Budget Details forms) required for submission by contacting the ITQ program staff at [Teacher\\_Quality@cpec.ca.gov](mailto:Teacher_Quality@cpec.ca.gov). There will be no technical assistance workshops, but questions will be accepted by e-mail ONLY to [Teacher\\_Quality@cpec.ca.gov](mailto:Teacher_Quality@cpec.ca.gov) until March 24, 2006. The responses to those questions will be included in a Frequently Asked Questions page on the CPEC Web site.

**The deadline for submission of complete proposals is:**

**Friday, March 31, 2006**

**5:00pm**

Five copies of proposals must be submitted in printed form (NO fax and e-mail submissions) to the following address:

Improving Teacher Quality Program  
California Postsecondary Education Commission  
770 L Street, Suite 1160  
Sacramento, CA 95814-3369

It is anticipated that master grant awards will be announced on or about April 30, 2006.

For additional information, please contact:

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